SYMPOSIUM ON GENETIC PSYCHOLOGY*

3. EFFECTS OF FRUSTRATION AND ANXIETY ON FANTASY AGGRESSION[1]

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SO FAR as society at large is concerned, there are probably few matters of as little immediate importance as the doll play of three-year-old children. Playing with dolls is a childish amusement, a delight for the carefree heart. It belongs to the young, who have no responsibilities—the young, for whom pain seems so quickly passing. Adults who must cope with the gut-constricting experiences of a real interpersonal world view childhood with patience and, too often, a mild contempt. Children are second-class citizens, and the things they so characteristically do are second-class things. Playing with dolls is one of them.

Such behavior is by no means second-class from the standpoint of psychological theory, however. Since those earliest sensitive observations of doll play by Anna Freud, psychoanalysts and experimental child psychologists alike have recognized that such play provides a kind of microcosmic laboratory for the study of motivation in its early stages of development.

Doll play is a form of fantasy living, behavior influenced in part by external things but without so many of the rules and restrictions that control real interpersonal activity. Fantasy is not categorically separable from other forms of behavior; it is a product of the same child, with the same habits and motives and the same potentialities for response, who lives and acts in the nonfantasy world. But fantasy occurs when some of the laws of the physical and social universes have been rescinded, and hence it is the product of the child's drives and habits when these have different constants in the behavior equation.

From a clinical standpoint, fantasy behavior must naturally be held in high regard. Any method of examining a child that provides a standard way of changing the weightings of particular drives, or other instigators, is a means of discovering what those drives are and how heavily they are weighted in other forms of behavior. If it can be shown, for example, that

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[1] The data here reported are from a research project on the personality development of young children conducted at the Iowa Child Welfare Research Station with the aid of a grant from the Rockefeller Foundation. The present study is a product of the project staff as a whole; the writer is simply a reporter. Other members of the research staff who contributed directly were Lois Jean Carl, Helen Faigin, Eleanor Hollenberg, John McKee, Vincent Nowlis, Pauline S. Sears, Margaret Sperry and John W. M. Whiting.

doll play reduces aggression-anxiety at a determinable rate, the clinician can discover how much aggression motivation a child possesses, and how severely it is being inhibited, in his daily interactions with parents or teachers or other children.

From the standpoint of psychological theory, fantasy has equal significance. Unless we are to suppose that the fantasy aspects of a child's behavior simply do not operate in accord with laws established for other aspects, the fantasies exhibited in doll play provide an easily manipulable experimental situation for the discovery and refinement of those laws. It is difficult, for example, to study the effects of reproving aggression in the home itself; in doll play the problem can be studied simply and briefly.

Lest this example seem so simple as to make all the possible contributions of experimentation appear trivial, a word must be said about the purpose of experimental research. The aim of genetic psychological science is the same as that of any other science—to develop predictive accuracy in antecedent-consequent relationships. Science generally achieves this aim by defining variables precisely, discovering relationships among them, and combining these principles into as economically formulated a theory as possible. In child psychology we are a long way from the completion of these tasks, and any one decade's work adds but minute fractions to the ultimate theoretical framework psychological science is building. Attempts to by-pass this aim of science, however, to flee from the difficulties of its accomplishment by denying its validity, only give the appearance of desperate excuses for the slowness with which the job is getting done. Let us be patient, and not too demanding that the universe be made dynamic and wholly understandable in the next fortnight. It is more important to find regularities in behavior, to discover antecedent-consequent relationships that make some coherent theoretical sense, than to satisfy our natural human passion to know all, or to understand the uttermost details of any one personality, before we die. And from the standpoint of psychological science, it is infinitely more important to develop principles, even very simple ones, that will predict future behavior, than to discover descriptive patterns that give an illusion of understanding a child's past. By these criteria, an examination of the effect of reproving or punishing children's doll play aggression becomes an important matter, for, as will be seen, this experiment does provide some principles that aid in the prediction of behavior.

Two major questions can be asked about the antecedents of doll play aggression: first, what factors determine its frequency, and second, what factors determine which doll agents are used for portraying it? Data obtained in two studies,[2] by Margaret Sperry and Eleanor Hollenberg of our

[2] A more detailed report of these investigations is published elsewhere (1).

Laboratory staff, have provided some suggestive clues that indicate the theoretical framework within which answers may be sought.

The data with which we are concerned are the aggressive actions of preschool-aged children in a doll play situation. A child was presented with a roofless doll house of six rooms containing conventional furniture; both the walls and furniture were movable. Five dolls—father, mother, boy, girl and baby—were handed to the child, one at a time, and were individually identified for him if he did not so identify them himself. The dolls were described as the family that lived in the house, and the child was asked to tell a story about what the family did. He was carefully assured that he could have them do anything he wanted, that there were no restrictions on his play. In general, the methodological details of the procedure were those previously found to be most conducive to the free expression of aggression (3). The child was allowed to play for fifteen minutes and then was returned to his preschool group. This procedure was carried out on four occasions, two to four days apart.

Recording of the play was in terms of behavior units. An observer behind a one-way screen recorded the agent and object of each action sequence, and the behavior category to which it belonged. There were a number of categories, including various kinds of aggression, but for the present analysis these have been combined in such a way as to provide two descriptive scores: routine or stereotyped behavior that reflected conventional household activities of whatever doll was being used ("the mommy is getting breakfast"), and aggression ("the daddy spanks the baby"; "the girl hides when her daddy calls her"). The experimental data, therefore, are in the form of frequencies of occurrence of these two categories per fifteen or per sixty minutes, and the frequency with which each doll was used as the agent for each kind of act.

First consider the antecedents of sheer frequency of aggressive acts. Considerable evidence has been amassed in recent years to show that aggression is one of the common reactions to frustration, though by no means the only one, and that the strength or amount of real life aggression varies positively with the severity of frustration.

There are various possible explanations of this quantitative relationship. One hypothesis, suggested by Dr. John W. M. Whiting, is that frustration produces additional internal instigation which summates with whatever other drives are operative at the moment, and increases their strength. If an aggressive act occurs, its strength would then depend in part on how much drive value was added by the frustration.

In order to determine whether the frustrations of a child's home life had this kind of facilitating effect on fantasy aggression, it was necessary to obtain ratings of the severity of frustration in the home. Dr. Vincent Nowlis

interviewed the mothers of thirty children to obtain information concerning methods of child rearing. A scale was constructed for rating the severity of the frustrations imposed both in infancy and currently. The thirty children could then be divided into two equal-sized subgroups, those whose mothers were rated in the *upper* half of the group on severity of frustration, and those whose mothers were rated in the *lower* half. The hypothesis specifies that the more severely frustrated children would be the more aggressive. This proved to be true; the higher frustration group showed a higher frequency of doll play aggressive acts. The variability was large, however, and the difference was not very reliable. Evidently some other factor besides frustration was influential in controlling frequency.

The Whiting hypothesis suggests where to search for this next variable. Let us assume that every child has some initial motivation to perform aggressively. Punishment of this aggression would create an anxiety that would tend to inhibit the aggressive behavior in the stimulus setting where the punishment originally occurred. That is, if a child's overt aggression were severely punished by his mother, that particular kind of aggression would tend to be eliminated, or at least reduced, when the mother was near. Being aggressive and fearing to express aggression creates a conflict, however, and this conflict itself would serve as a frustration. Such a frustration should increase the total drive available for instigating aggression. In other words, the more anxiety a child feels about expressing his aggression, the more instigation to aggression he will have.

The question is, Where will he express this aggression? The punishment that created his anxiety occurred at home, and therefore he will probably reduce his actual overt aggression there. Still, he has an increased drive to express it. Here a new behavior process must be taken into account—the process of stimulus generalization. When the child is placed in the very permissive doll play situation, which is only partly like his own home, he is being placed in a stimulus situation that is far and away from the original reinforcing situation on a similarity continuum. By the principle of stimulus generalization, the doll setting will provide stimulation toward both aggression and aggression-anxiety.

But an important qualification enters here. Neal Miller (2) has shown that the anxiety gradient is steeper than the aggression gradient. That is, anxiety diminishes more rapidly than aggression when the mother is absent. The doll house is only somewhat like the home, and with these differential gradients, the child would be expected to show more aggression than anxiety.

If this principle is combined with Whiting's hypothesis that the conflict itself increases the instigation to aggression, we are faced with the prediction that the more severely a child is punished for aggression by his mother, the more aggression will he show in doll play.

In order to test this reasoning, the interview materials were again examined and a rating scale was constructed for measuring the mother's punitiveness of aggression. The thirty children were then divided into two equal subgroups, those whose mothers were in the upper half, and those whose mothers were in the lower half of the punitiveness scale. The average frequencies of aggression for the two groups were compared, and as predicted, the more severely punished children had a higher frequency of aggressive acts. The difference is significant at a 5 per cent level of confidence.

It is worth examining the relationship between the two scales of frustration and punitiveness. If they were highly correlated, the two sets of comparisons just cited would be mainly measures of the same factor. In fact, however, the scales correlate only .17. The two variables are almost completely independent, and it is therefore clear that the low reliability of the comparison of either variable alone is in part a product of uncorrelated variability introduced by the other.

It is unfortunate that no measures of the children's aggression at home were available, for it will be recalled that the derivation of these findings rested on the assumption that maternal punishment would inhibit overt aggression.[3] The direct effects of punishment have been exemplified in another experiment, however.

Another group of twenty-three children were divided into two subgroups, equated for age and sex. One, the control group, was given four permissive sessions as in the previous experiment. The other, the experimental group, was treated similarly on all but the second session, when each expression of aggression was reproved ("Now, John, you know nice boys don't do things like that").

The two groups expressed an equal amount of aggression on the first session, but such behavior began to be inhibited in the experimental group during the second. On the third session, the experimental group performed only a quarter as many aggressive acts as the control group, even though the experimenter's attitude was once again permissive. On the fourth session this permissiveness began to tell; the experimental group's aggression increased to the level of the control group on session two. The difference in

[3] The lack of these aggression-at-home data is even more unfortunate from another standpoint. The present reasoning assumes that both groups, the more- and the less-punished, were equal in nonparentally determined sources of instigation to aggression, and that the difference in severity of punishment was the crucial variable. It is possible, of course, that the more-punished children were more aggressive to start with (for constitutional or other reasons), and therefore evoked more severe punishment from their more severely irritated parents. If this were the case, the amount of doll play aggression would be simply another measure, in addition to home behavior, of the strength of instigation to aggression, and the drive produced by conflict would be but a secondary factor conducing to the same end results. In other words, the present data would be less crucial for the conflict-drive hypothesis. Such an explanation would not account, however, for the differences between the two groups with reference to which doll agents were most frequently used, as described later in this paper.

frequency was significant at well beyond the 1 per cent level of confidence on the third session and just less than 1 per cent on the fourth.

So much for frequency of aggression. High amounts of fantasy aggression are related to home frustration and to maternal punishment, while direct punishment of fantasy itself reduces frequency.

Now let us consider which doll the child uses to portray his aggression. Here the problem of identification enters. A child's identification with his parents is based in part on the nurturing behavior that the parents show toward him. That is, how much a child identifies with his parents depends on how much affectionate and nonpunitive nurturance he gets. The children of highly punishing mothers would show least identification with them.

In doll play there is at least one good measure of identification, namely, the extent to which the child uses the parent dolls for the portrayal of routine household activities. In using the dolls for this purpose, the child appears to be adopting the parental role. He is playing as if he were himself the parents, and had their prestige, power and care-taking position in the family.

According to this reasoning, the children of more highly punitive mothers should use the parent dolls, as agents of routine nonaggressive acts, less often than should the children of less punitive mothers. The two subgroups mentioned earlier give an opportunity for testing this hypothesis. A comparison of the upper and lower halves of the distribution of mothers' punitiveness shows that the children of the less punitive mothers do use the parent dolls more for routine activities than do the children of the more punitive mothers. The difference is at the 5 per cent level of confidence.

Now, if it may be hypothesized that there is a dimension of *degree of identification* comparable to a dimension of *stimulus similarity*, the principles of generalization should operate with respect to identification also. In the doll play performance, for example, children should use the parent dolls as agents of routine activities more often than the child dolls. This proved to be the case. The order of mean frequency of use of a doll as agent was in the order: parent doll of same sex, parent doll of the other sex, child doll of same sex, and child doll of other sex.[4] At the first session of these experiments, the parent dolls were used, on the average, in about 57 per cent of the behavior units categorized as routine and nonaggressive.

The next step is to examine the effects of punishment on the expression of aggression. If we assume a dimension of identification along which generalization can occur, then, just as with routine behavior, the most aggression should be portrayed through the parent dolls, and the least through the

[4] The baby doll has not been included in this analysis because certain additional factors such as the children's indecision about its sex, and possibly the presence or absence of a baby at home, led to great variability in its usage.

child dolls. But since aggression nearly always gets punished at home, there should also be a generalization of aggression-anxiety along this dimension. Since this latter gradient is steeper, however, the two factors should not simply cancel each other out, making aggression from all dolls equally likely. On the contrary, the difference in steepness should produce relatively more child doll aggression. In other words, the greater the anxiety, the more aggression will be portrayed through the child dolls rather than the parent dolls.

This hypothesis can be tested in two ways, and both comparisons support it. First, one can compare the children of highly punishing mothers with those of low punishing mothers. The former subgroup showed almost exactly equal use of parent and child dolls for portraying aggression, while the children of less punishing mothers used the parent dolls nearly four times as much as the child dolls. The difference is significant at the 1 per cent level of confidence. In other words, the more anxious children used the parent dolls to portray aggression much less often than did the less anxious children.

In the other experiment, involving punishment of aggression during the second session, the control group increased from 37 per cent to 73 per cent usage of the parent dolls for aggression from the first to the fourth session, while the experimental group, which had had its aggression-anxiety increased by reproof, increased from 43 per cent to only 54 per cent. The increase for the control group is significant at the 5 per cent level of confidence but that for the experimental group is entirely nonsignificant.

One final effect of anxiety remains to be considered. In a number of previous investigations it has been shown that the total frequency of aggression in doll play increases from session to session. It has been supposed that this increase was a result of decreasing aggression-anxiety in the permissive atmosphere of these experiments. If this hypothesis is correct, we should expect that the ratio of parent doll to child doll aggressions would increase from the first to the fourth session. With both the control group of the punishment experiment and the entire group of the other study, this is the case, although the significance of both differences is a little less than the 5 per cent level of confidence. Thus, the dissipation of anxiety not only permits aggression to increase from session to session, but it becomes more and more expressed through the parent dolls.

These findings, it will have been noted, all relate to the average performance of *groups* of children. They do not apply to individual children. There may be several other variables besides frustration and punishment that influence the frequency of fantasy aggression and the choice of doll agents for its portrayal. Certainly the large within-groups variability in the present studies suggests that this must be the case. If so, much more experimentation will have to be done in order to isolate these additional variables. When

that task has been accomplished, the theoretical psychologist will move on to new problems.

The clinical psychologist, however, will at that point be able to make a simple reversal of the various antecedent-consequent relationships discovered, and apply them as principles of diagnosis. That is, he will be able to measure the frequency of aggression, and note the relative frequency of the different doll agents used in its expression, and from those data decide how seriously inhibited a child is with regard to aggression, how much anxiety he feels about its expression, how closely identified he is with his parents, and so on.

In summary, then, it may be suggested that the present stage of this research reveals two rather interesting clues the diagnostician can use. The data suggest that the child who shows a great deal of thematic aggression may be not only a highly frustrated child, but, contrary to common sense, also have been punished a great deal for his real life aggressions. In other words, high doll play aggression can be a product of parental attempts to reduce aggression. Secondly, the rapid increase, through several sessions, of the use of parent dolls in aggressive sequences suggests a relatively low anxiety about parental punishment. That is, the child who portrays the parent dolls as *most* aggressive is likely to be the child whose own parents are actually the *least* punitive or counteraggressive toward him.

References

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